

Appln No. 10/582,302  
Amdt date June 9, 2010  
Reply to Office action of March 16, 2010

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. - 41. (Cancelled)

42. (Currently Amended) A dental treatment apparatus comprising:  
an instrument having a forward end equipped with treatment tool for treating a lesion in an oral cavity; and  
a light radiating unit having a first light source for emitting an excitation light and a second light source for emitting a white illumination-light into said oral cavity, said first and second light sources being disposed at or near said forward end, wherein  
a wavelength of said excitation light is selected from within a near ultraviolet region of  $405\pm 50$  nm, a red region of  $700\pm 100$  nm, an infrared region, or a near infrared region, and  
wherein  
said light radiating unit is configured to radiate said excitation light or said white light by switching lighting between said first light source and said second light source, or configured to variably adjust a light emission level of at least one of said first light source and said second light source.

43. (Currently Amended) A dental treatment apparatus as claimed in claim 42, wherein said light radiating unit is configured to simultaneously radiate said excitation light and said white illumination-light.

44. (Currently Amended) A dental treatment apparatus as claimed in claim 42, wherein said light radiating unit is configured to selectively radiate said excitation light and said white illumination-light.

45. (Cancelled)

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46. (Currently Amended) A dental treatment apparatus as claimed in claim 42, wherein each of said first light source for emitting excitation light and said second light source for emitting said white illumination-light include a light-emitting device constructed from a light-emitting diode or a semiconductor laser diode.

47. (Currently Amended) A dental treatment apparatus as claimed in claim 42 ~~[[46]]~~, wherein said second light source for emitting said white illumination-light includes a light-emitting device for emitting a white light.

48. (Currently Amended) A dental treatment apparatus as claimed in claim 47, wherein said light radiating unit is configured to simultaneously radiate said excitation light and said white illumination-light.

49. (Currently Amended) A dental treatment apparatus as claimed in claim 46, wherein said light radiating unit is configured to variably adjust light emission levels of both said light sources.

50. (Currently Amended) A dental treatment apparatus as claimed in claim 46, wherein said light radiating unit includes a plurality of light sources for emitting said excitation light at different wavelengths, and is configured to radiate light at one wavelength by switching between said plurality of light sources ~~or is configured to variably adjust a light emission level of at least one of said light sources.~~

51. (Cancelled).

52. (Currently Amended) A dental treatment apparatus as claimed in claim 50, wherein said light radiating unit includes a plurality of light sources for emitting said excitation light at different wavelengths, and is configured to radiate said excitation light at one wavelength by switching lighting between said plurality of light sources, ~~or is configured to variably adjust an excitation light emission level of at least one of said light sources.~~

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53. (Previously Presented) A dental treatment apparatus as claimed in claim 50, wherein said light radiating unit includes a plurality of excitation light sources for emitting said excitation light at different wavelengths and a white light source for emitting white light, and is configured to radiate said excitation light and said white light by switching lighting between said plurality of excitation light sources and said white light source, or is configured to variably adjust a light emission level of at least one light source selected from among said plurality of excitation light sources and said white light source.

54. (Previously Presented) A dental treatment apparatus as claimed in claim 42, wherein said second light source of said light radiating unit includes a type of lamp selected from a group consisting of a halogen lamp, a xenon lamp, a sodium lamp, a metal halide lamp, a mercury lamp, and a blacklight lamp.

55. (Previously Presented) A dental treatment apparatus as claimed in claim 54, wherein said light radiating unit includes an optical filter for selecting light of a designated wavelength from the light emitted from said first light source.

56. (Previously Presented) A dental treatment apparatus as claimed in claim 55, wherein the light of said designated wavelength is selected by said filter with a second filter having a different characteristic.

57. (Previously Presented) A dental treatment apparatus as claimed in claim 54, wherein said light radiating unit is configured to variably adjust a light emission level of said second light source.

58. (Previously Presented) A dental treatment apparatus as claimed in claim 42, wherein said light radiating unit includes a plurality of light sources for emitting said excitation light at different wavelengths, and is configured to select the excitation light to be emitted by sequentially switching between said plurality of light sources to sequentially radiate said excitation light at said different wavelengths in a time-division fashion.

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59. (Currently Amended) A dental treatment apparatus as claimed in claim 42, wherein said light radiating unit includes a radiating part from which said excitation light and said white illumination-light are radiated toward said lesion, and wherein said radiating part is disposed in said treatment tool or near a mounting portion of said treatment tool.

60. (Currently Amended) A dental treatment apparatus as claimed in claim 59, wherein said excitation light and said white illumination-light are radiated from an area surrounding said treatment tool toward said lesion.

61. (Previously Presented) A dental treatment apparatus as claimed in claim 42, wherein said first and second light sources are mounted on a detachable member formed to be detachable from said forward end, and  
said detachable member includes a connecting member which is configured to detachably engage with said forward end and which, when placed into engagement with said forward end, to supply power to said light sources.

62. (Withdrawn) A dental treatment apparatus as claimed in claim 42, wherein said treatment tool is attached to said forward end, and  
said first and second light sources are disposed on said forward end.

63. (Withdrawn- Currently Amended) A dental treatment apparatus as claimed in claim 62, wherein said light radiating unit radiates said excitation light and said white illumination-light onto said lesion in a time-division fashion.

64. (Currently Amended) A dental treatment apparatus as claimed in claim 42, wherein a radiating part, from which said excitation light or said white illumination-light are radiated toward said lesion, or each of said first and second light sources is provided in an adapter having a mounting member capable of being detachably mounted on the forward end of said instrument.

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65. (Currently Amended) A dental treatment apparatus as claimed in claim 64, wherein said first light source for emitting said excitation light and said second light source for emitting said white illumination-light into said oral cavity each include a plurality of light-emitting devices, and wherein

said plurality of light-emitting devices are arranged side by side in an end face portion of said adapter.

66. (Previously Presented) A dental treatment apparatus as claimed in claim 64, wherein said adapter has a ring-shaped structure which is detachably fitted onto the forward end of said instrument.

67. (Previously Presented) A dental treatment apparatus as claimed in claim 64, wherein said adapter includes an operating part for operating light illuminations of said first and second light sources.

68. (Previously Presented) A dental treatment apparatus as claimed in claim 67, wherein said adapter-includes a power supply for driving said light sources for lighting.

69. (Previously Presented) A dental treatment apparatus as claimed in claim 68, wherein said power supply is a primary cell or a secondary cell.

70. (Previously Presented) A dental treatment apparatus as claimed in claim 64, wherein a power supply for driving said first and second light sources is provided separately from said adapter.

71. (Previously Presented) A dental treatment apparatus as claimed in claim 70, wherein said power supply is detachably mounted on a body of said instrument.

72. (Previously Presented) A dental treatment apparatus as claimed in claim 64, wherein an operating part for operating lighting of said first and second light sources is detachably mounted on a body of said instrument.

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73. (Previously Presented) A dental treatment apparatus as claimed in claim 64, wherein said mounting member is configured to elastically hold said adapter on the forward end of said instrument.

74. (Previously Presented) A dental treatment apparatus as claimed in claim 64, wherein said adapter includes a filter plate having a plane surface perpendicular to an axis direction of a body of said instrument, and said plane surface spreading to encircle said body.

75. (Currently Amended) A dental treatment apparatus as claimed in claim 64, wherein when said instrument includes an illuminating unit for illuminating said oral cavity, said adapter is mounted at a position that interrupts an [[the]] illumination light emitted from said illuminating unit.

76. (Withdrawn) A dental treatment apparatus as claimed in claim 42, wherein said instrument is a laser handpiece configured to radiate a treatment laser light into said oral cavity together with a guide light-to locate an area being illuminated by said treatment laser light, and wherein

said excitation light is contained in said guide light.

77. (Previously Presented) A dental treatment apparatus as claimed in claim 46, wherein said light source includes said light-emitting device mounted near a mounting portion of said treatment tool.

78. (Previously Presented) A dental treatment apparatus as claimed in claim 77, wherein said light-emitting device is mounted in such a manner as to encircle said treatment tool.

79. (Previously Presented) A dental treatment apparatus as claimed in claim 77, wherein said light-emitting device is accommodated in a position near the mounting portion of said treatment tool.

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80. (Previously Presented) A dental treatment apparatus as claimed in claim 42, wherein said light radiating unit includes a plurality of light sources each for emitting excitation light of a different wavelength, and

an operating part configured to switch lighting between said plurality of light sources or configured to variably adjust a light emission level of at least one of said light sources is mounted on said instrument.